

National Bee-Keepers' Convention at Denver, Sept. 3-5, '02

AMERICAN BEE JOURNAL

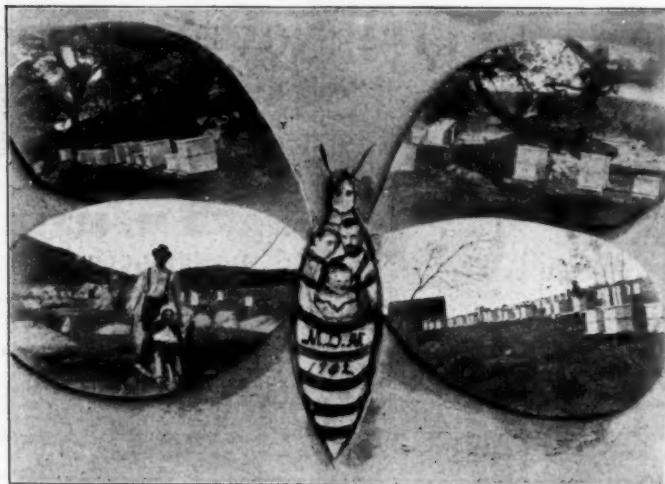


GEORGE W. YORK,
Editor.

CHICAGO, ILL., AUG. 7, 1902.

FORTY-SECOND YEAR
No. 32.

WEEKLY



"BUTTERFLY APIARIES" OF MAYNARD D. NICHOLS, OF SAN DIEGO CO., CALIF.
(See page 500.)

THE AMERICAN BEE JOURNAL

PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY

144 & 146 Erie St., Chicago, Ill.

Entered at the Post-Office at Chicago as Second-Class Mail-Matter.

EDITOR—George W. York.
DEPT. EDITORS.—Dr. C. C. Miller, E. E. Hasty.
SPECIAL CORRESPONDENTS—G. M. Doolittle,
Prof. A. J. Cook, C. P. Dadant,
R. C. Aikin, F. Greiner, Emma M. Wilson,
A. Getaz, and others.

IMPORTANT NOTICES.

The Subscription Price of this Journal is \$1.00 a year, in the United States, Canada, and Mexico; all other countries in the Postal Union, 50 cents a year extra for postage. Sample copy free.

The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "dec01" on your label shows that it is paid to the end of December, 1901.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and duly credited.

Advertising Rates will be given upon application.

The National Bee-Keepers' Association.

OBJECTS:

To promote and protect the interests of its members.
To prevent the adulteration of honey.
To prosecute dishonest honey-dealers.

BOARD OF DIRECTORS.

E. WHITCOMB,	THOMAS G. NEWMAN,
W. Z. HUTCHINSON,	G. M. DOOLITTLE,
A. I. ROOT,	W. F. MARKS,
R. C. AIKIN,	J. M. HAMBAUGH,
P. H. ELWOOD,	C. P. DADANT,
E. R. ROOT,	DR. C. C. MILLER.

EXECUTIVE COMMITTEE.

W. Z. HUTCHINSON, President.
OREL L. HERSHISER, Vice-President.
DR. A. B. MASON, Secretary, Toledo, Ohio.

EUGENE SECOR, General Manager and Treasurer, Forest City, Iowa.

MEMBERSHIP DUES, \$1.00 a year.

If more convenient, Dues may be sent to the office of the American Bee Journal, when they will be forwarded to Mr. Secor, who will mail individual receipts.

A Celluloid Queen-Button is a very pretty thing for a bee-keeper or honey-seller to wear on his coat-lapel. It often serves to introduce the subject of honey, and frequently leads to a sale.



NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of the buttons] as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

The picture shown herewith is a reproduction of a motto queen-button that we are furnishing to bee-keepers. It has a pin on the underside to fasten it.

Price, by mail, 6 cents; two for 10 cents; or 6 for 25 cents. Send all orders to the office of the American Bee Journal.

BEST Extracted Honey For Sale

ALL IN 60-POUND TIN CANS.

Alfalfa Honey

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.



Basswood Honey

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms. It has a stronger flavor than Alfalfa, and is preferred by those who like a distinct flavor in their honey.

Prices of Alfalfa or Basswood Honey:

A sample of either, by mail, 10 cents, to pay for package and postage. By freight—two 60-pound cans of Alfalfa, 7½ cents per pound; 4 cans or more, 7 cents a pound. Basswood Honey, ½ cent more per pound than Alfalfa prices. Cash must accompany each order. You can order half of each kind of honey, if you so desire. The cans are two in a box, and freight is not prepaid. **Absolutely Pure Bees' Honey.**

Order the Above Honey and then Sell It.

We would suggest that those bee-keepers who did not produce enough honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere.

GEORGE W. YORK & CO., 144 & 146 Erie St., Chicago, Ill.

The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.



[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver; and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for \$1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with \$3.00). We will club the Novelty Knife and the Bee Journal for one year, both for \$1.90.

GEORGE W. YORK & CO.

Chicago, Ill.

Please allow about two weeks for your knife order to be filled.

AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

THE OLDEST BEE-PAPER IN AMERICA

42d YEAR.

CHICAGO, ILL., AUG. 7, 1902.

No. 32.

* Editorial. *

We Invite You to Subscribe for the American Bee Journal.

This invitation is extended to the thousands who will get this copy as a sample. We only wish those who know and appreciate the value of the American Bee Journal could visit all who will receive this number and who are not now subscribers, and tell them just what they think of it. If that could be done, we believe that our subscription list would be doubled in a month.

But, of course, it won't do for us to "blow our own horn" too hard. We will simply ask you to examine this number carefully, and see if you don't think it is *worth all of two cents*. That is just what it costs when you pay us \$1.00 for a whole year's subscription, or 52 numbers.

Shall we not have your name and address for our list right away?

Supersede the Invariable Rule.

It seems hard for some to believe that supersede is anything but exceptional, and when a queen is superseded it is considered something out of the usual. The beginner should have it impressed upon his mind that in the ordinary course of events *every queen at the termination of her life is superseded*. It is the invariable, the inevitable thing. Lately a correspondent wrote:

"Of the clipped ones I think fully 10 percent have been superseded, while not one of the unclipped, so far as I know, have been disposed of."

If only 10 percent of his clipped queens are annually superseded then he has no reason to find fault with clipping, for that means that the average life of his queens is 10 years, and 10 years is a longer term of life for a queen than has ever before been reported. The reason that he has not observed much superseding among his unclipped queens is that the superseding queen looks so much like the old queen that he does not recognize any superseding. If he will observe carefully, he will probably find that about a third of his queens, whether clipped or unclipped, are superseded annually. In other words, the average life of a queen does not exceed three years.

The Reputation of Extracted Honey

is a very varying quantity; that is, it varies greatly in different localities. Some bee-keepers say they can get as much for extracted as for comb, while others can scarcely

dispose of extracted at any price. Whatever other reasons there may be for this, one all-sufficient reason is the varying character of the product itself. In some cases extracted honey is so well ripened, so rich, and of such fine body, that some prefer it to comb honey at the same price, especially for some uses.

As there are always new comers on the field, the advice to be scrupulously careful as to the character of extracted honey is always timely. Small wonder that people do not care for honey that is thin, raw, and inclined to sour. Some extract when a part of the honey is little more than nectar, because they will get more pounds than if they wait till the honey is thick. They will have more pounds of honey and water, but not more pounds of honey, and although they may get more pounds, they will not have so much money in the long run.

There is a difference of opinion as to whether honey may be ripened artificially to equal that ripened by the bees. In any case it is well for the beginner to be on the safe side, extracting only that which is sealed. The practice of some is to extract only at the close of the season. It is a safe plan.

Let the beginner remember that a single sale of honey that is not thoroughly ripened, of good flavor, and scrupulously clean, can have its evil effects neutralized only by many subsequent sales of the proper article, if indeed such subsequent sales can be made at all.

Vinegar for Bee-Stings.—A Canadian subscriber writes:

"Rub on a little good vinegar. You will find almost instant relief. Try it."

May be *honey-vinegar* would be best to subdue the pain caused by a bee-sting!

Prevention of Swarming.—Editor Root says "the bee-keeping world would give thousands of dollars to get hold of a plan by which it could put strong colonies with *small* brood-nests at out-yards and leave them there with a reasonable assurance that those colonies would not swarm;" and he thinks that two plans offered by Dr. Miller do not fill the bill. Dr. Miller says:

One is to take away all brood about swarming-time, and the other is to get the bees to rear a young queen about swarming-time. Giving a young queen reared elsewhere will not answer. I've had a swarm issue with a young queen that I had given not a week before, she having just begun to lay; but when a colony has itself reared a young queen, and that queen has begun to lay, I never knew or heard of such a colony swarming till the next year. Gravenhorst gave this as reliable without being able to explain why the young queen must be reared in the hive itself.

Bleaching Honey.—Mr. J. E. Crane, in *Gleanings in Bee-Culture*, gives his experience in bleaching honey so as to change No. 2 honey into No. 1, and No. 1 into fancy. His success has been such that he has added to his honey-house a permanent structure 10x13 feet, with gable roof, and mostly glass sides. He says:

I ran some 6500 combs the past year through the bleaching process with very satisfactory results. Combs that are only a little off would come out almost as white as snow, while those a little darker would be greatly improved. A few hundred, however, had so much propolis mixed with the cappings that no amount of bleaching would make them white, as I held some of them to it for three months, and finally concluded I might as well try to change the skin of an Ethiopian. It takes more time at best than one would expect. Even those combs that are but slightly stained usually require several days to make them look bright.

In closing, he wisely suggests that it would be much better to produce comb honey without stains.

"Pollen-Clogged Combs in wired frames cleaned, 4s. per doz., standard frames." So runs the beginning of an unusual advertisement in the British Bee Journal. A dollar a dozen seems a pretty good price, but the work is done at least promptly, as the advertiser says he will send back the cleaned combs by return mail. It is much better, however, to try to have pollen used by the bees, in some cases pollen being worth more than an equal weight of honey.

Uniformity of Hives and Fixtures is a thing whose importance is keenly felt by the experienced bee-keeper. Not always—perhaps not often—by the beginner. Indeed, one of the first things with a large number of beginners is to try to make some change in hives or fixtures, later on to find that what was supposed to be an improvement was anything but that. It is safe to give to the average beginner the advice: Don't invent.

After some experience the bee-keeper becomes aware of the nuisance of different measurements when perhaps he finds himself in possession of frames of two kinds so that they can not both be used in the same hive. Then he falls to belaboring the manufacturer. In some cases the manufacturer may be to blame for encouraging changes, but generally it is money in his pocket to have as few changes as possible. If all the bee-keepers in the country would agree upon one kind of hive, one kind of frame, one kind of everything, the manufacturer would never need to have on his hands dead stock out of style. As matters now stand, a set of bee-keepers in one locality insist on a certain kind of goods, a

set in some different locality want something different, the real need for something different perhaps being real, perhaps fancied. It costs more for the manufacturer to make two kinds than to make one kind; and when the need for one of the kinds turns out to have so little foundation, in fact, that the goods are no longer called for, then the manufacturer is left with more or less of the stock on hand; and so it is that from time to time remnants of odd goods are advertised at ruinous prices. In the final analysis the loss must fall more or less upon the bee-keeper, for manufacturers are not in the business entirely for their health, and must make themselves good for losses upon odd goods by prices on regular articles.

The moral for all this is for each bee-keeper to be as conservative as possible, using only such fixtures as are standard, unless there seems an imperative need for something different, in which case he must be willing to pay the price for odd goods.

Competition of Cuban Honey is a thing that is not to be feared by bee-keepers of the United States, in the judgment of W. K. Morrison. He says in *Gleanings in Bee-Culture*:

Cuba bulks largely in the mind's eye of some Northern bee-men just now. They forget that the land is comparatively small. Texas is ten times as big, and a good deal of Cuba will be rendered unfit for bee-keeping by the advance of the sugar industry. But even if it produces all the honey that its most sanguine admirers think it will, it is certain very little of it will be consumed in the United States. Honey sells for more money in Europe than it does in America; hence, for a long time Cuban honey will gravitate toward Europe, as is the case at present.

I do not think the present tariff of a cent or so a pound on honey sent to the United States avails very much. It only tends to discourage trade. If honey were on the free list the dealers in New York would buy the whole Cuban and West Indian crop and re-export it to Europe. The American bee-keeper would lose nothing by the operation; on the contrary, a market would be created which, in times of plenty, would be a valuable asset to the United States.

Weekly Budget.

THE BUTTERFLY APIARIES of Maynard D. Nichols are shown on the first page this week. He wrote as follows when sending the picture:

EDITOR AMERICAN BEE JOURNAL:—I have been trying for some time to get a suitable picture of my bee-keeping investment, and have not been very successful, but will offer the enclosed. If the whole of the wings could have been taken it would have suited my idea. I have named my apiaries "Butterfly Apiaries," and the arrangement of the pictures forms one.

This is my fourth season with the bees on a large scale—all short-crop years—and during these years, with the great help of the "old reliable" American Bee Journal, one other leading paper, and one of my neighbors, I have acquired some of the rudiments of bee-keeping as managed now-a-days.

In the "Butterfly" the two upper pictures represent my increase of last year, nearly all caught in decoy hives placed in trees, then transferred to standard hives. The picture with the wheelbarrow scene is my queen-

rearing stock exhibit near my house, and the other is my main apiary with 100 colonies in it. They are according to Dr. Miller's plan, except there are three twos on each 16-foot rack up from the ground, so that big skunks can not molest them so badly. I have adopted the 9-frame "Jumbo" hive, and am getting very strong proof that a large hive is the best for this canyon. The 9-frame hive is being used more from year to year in this county.

In the body of the "Butterfly" is the picture of the members of my family.

I run every colony for extracting, and have the honey-house arranged so that I can wheel the honey in on a slight incline, uncap it, put through the extractor, then it runs on a cheese-cloth strainer held by a hoop over a tank large enough to hold two cases if necessary. My honey-house is 8x20 feet, with part two story, so I am not obliged to handle the honey very much; then the tank is proof from dirt, bees or ants, and I feel that with queen-excluders I am able to put my crop up for the market as clean and pure as is required.

To those bothered with ants I would suggest that they try putting a tin pan over their hole with a bit of bisulphide of carbon under it, and put dirt around the edge so it will be air-tight. It is the best and cheapest way we have found yet.

I wish to say "Amen" to the Editor's advice some time ago, not to remove the old queen until the new one has been received.

MAYNARD D. NICHOLS.

San Diego Co., Calif.

THE COLORADO ASSOCIATION is to hold a joint session with the National in Denver in September. The program of their 23d annual session, held Sept. 3, is as follows:

WEDNESDAY, SEPT. 3, 1902.

10 o'clock.

Invocation.

Reading Minutes.

President's Address.

(After the President's address ten minutes will be given for members to offer suggestions or give notice of any business or discussion that they wish to bring before the convention. Come prepared.)

11 o'clock.

A four-cornered discussion, by four prominent apiarists, speakers limited to 10 minutes each.

1st subject, "Association Work and Influence—If Good or Bad, and Why."

2d, "Comb Honey Production—Best Hive and System, and Why."

3d, "Extracted Honey Production—Best Hive and System, and Why."

4th, "The Most Pressing Need of Our Pursuit."

General debate on the foregoing subjects, speakers limited to three minutes except by consent of the convention.

Appointment of Temporary Committees.

Dinner.

AFTERNOON SESSION.

1 o'clock.

Question-Box.

1:30 o'clock.

Unfinished Business.

Report of Committees.

New Business. 2:30 o'clock.

Election of Officers.

3 o'clock.

Paper: "The Bee in Literature"—F. L. Thompson.

Miscellaneous Business.

The Program of the National.

FIRST DAY—WEDNESDAY—EVENING SESSION.

7:30 o'clock.

Invocation.

Music.

Addresses of Welcome by Pres. Harris, Mayor Wright, and Gov. Orman.

Responses by Pres. Hutchinson, Sec. Mason, and Director Miller.

8:30 o'clock.

"Bee-Keeping from the Atlantic to the Pacific, as Seen Through the Camera and Stereopticon"—E. R. Root, of Ohio.

SECOND DAY—THURSDAY—MORNING SESSION.

9:30 o'clock.

Music.

President's Address—"The Future of Bee-Keeping"—W. Z. Hutchinson.

Discussion.

10 o'clock.

"Which is the Most Hopeful Field for the National Association?"—Dr. C. C. Miller, of Illinois.

Response by Rev. E. T. Abbott, of Missouri.

Discussion.

11 o'clock.

Question-Box.

SECOND DAY—THURSDAY—AFTERNOON SESSION.

1:30 o'clock.

Music.

"Reporting of the Honey Crop; When and How it Should Be Done"—C. A. Hatch, of Wisconsin.

Response by Frank Rauchfuss, of Colorado.

Discussion.

2:30 o'clock.

"Bee-Keeping Lessons that May be Learned from the Word 'Locality'"—H. C. Morehouse, of Colorado.

Response by E. R. Root, of Ohio.

Discussion.

3:30 o'clock.

Question-Box.

SECOND DAY—THURSDAY—EVENING SESSION.

7:30 o'clock.

Music.

"The Outside and Inside of a Honey-Bee" (Illustrated by the Stereopticon)—Prof. C. P. Gillette, of Colorado.

THIRD DAY—FRIDAY—MORNING SESSION.

9 o'clock.

Music.

"Selling Extracted Honey at Wholesale—How to Get the Best Prices"—J. F. McIntyre, of California.

Response by T. Lytle, of Colorado.

Discussion.

10 o'clock.

"Putting Up Extracted Honey for the Retail Trade"—R. C. Aikin, of Colorado.

Response by George W. York, of Illinois.

Discussion.

11 o'clock.

Question-Box.

THIRD DAY—FRIDAY—AFTERNOON SESSION.

1:30 o'clock.

Music.

"Managing Out-Apiaries for Comb Honey"—W. L. Porter, of Colorado.

Response by M. A. Gill, of Colorado.

Discussion.

2:30 o'clock.

Question-Box.

3:30 o'clock.

Trolley Ride—"Seeing Denver."

THIRD DAY—FRIDAY—EVENING SESSION.

9 o'clock.

Banquet.

A. B. MASON, Sec. Sta. B, Toledo, Ohio.

Remember it is less than a month from this date when the Denver convention will be in full blast. We hope that as many bee-keepers as possible are planning to be there. It promises to be the biggest and best of all the meetings of the National Association. It ought to be. Colorado is a great honey-producing State. It has within its borders some of the greatest bee-keepers in the world. And they, with many from all over the United States, will be at the convention.

It's in Denver. And Sept. 3, 4 and 5 is the time.

Contributed Articles.

Two Queens with a Swarm—Mysteries of Swarming.

BY G. M. DOOLITTLE.

QUESTION.—“Does a colony of bees ever have two queens? I hired a swarm of bees the other day that had two queens, I am pretty sure. I have kept bees only a short time, but I think I know what a queen is. My bee-keeping neighbor tells me that there were two swarms which I hived, and says there is never more than one queen in a colony. Which of us is right? Please tell us through the columns of the American Bee Journal, as we both take that paper.”

ANSWER.—Very likely both your neighbor and yourself may be right in this case, but you have things a little mixed. I think such a thing was never known as a prime swarm of bees coming from a colony in a normal condition, having two queens with it. To be sure, we do sometimes have two laying queens in a hive at the same time, although such is a rare exception; but so far as I am aware no colony was ever known to swarm at such a time, and both of these laying queens go with the swarm. With a prime swarm, or what is often erroneously called a first swarm, there always accompanies it a laying queen. All swarms having a young or virgin queen can be properly classed as after-swarms. When a prime swarm issues it generally leaves maturing queen-cells in the old hive, from which, when matured, a young queen leads out all after-swarms.

The only exception to this is that hinted at above, where, from some cause, the old queen dies near the swarming season, when several queen-cells will be formed on the brood left, so that young or virgin queens may lead out what appears to be a prime swarm.

For convenience, all swarms except the one having the old or laying queen are called “after-swarms” by bee-keepers, and from this explanation the readers may know what the term “after-swarms” means. As a rule, about six to eight days after the prime swarm has issued the first young queen emerges from her cell, and if after-swarming is considered by the bees to be the best economy for the colony, the other young queens are kept in their cells by a little knot of bees clustering on them at all times after said queens are heard to be gnawing at their cell-covers, so the lid of the cell can not be removed to let the queen out, her majesty being fed all the time through an aperture made by the gnawing of the imprisoned inmate in the royal cell. If further swarming is not considered “economy” by the bees, then all the other queen-cells are torn down after the young queens have been destroyed, so that the first which emerged is the only queen in the hive.

If the cells are protected as above, the first emerged queen seems to get into a rage, and utters shrill notes at intervals, sounding something like tee—tee—tee-tee, te, t, t, t, would sound uttered in this way, and called the “piping of the queen,” which is kept up for about two days, when the second swarm, or the first of the after-swarms issues. This piping of the queen is always heard if listened for before all after-swarms, or any case of a plurality of queens in a colony intending to send out a swarm. The queens kept back in their cells by the bees are growing in age and strength, the same as is the one having her liberty, they telling this by their trying to pipe the same as the one does that is out of her cell, which noise is termed “quahking;” and so it happens that, during the hurry and bustle of second swarming, one or two of these queens hastily finishes biting the cover off the cell and gets out with the swarm, in which case two or more queens are found with the swarm, as was the case with our querist, although it is a rare thing to see more than two or three queens with a second swarm, unless said swarm has been long delayed on account of bad weather.

If a third swarm is to issue, the bees now cluster about the remaining royal cells having queens in them, the same as before, keeping all queens prisoners except one, which liberated queen scolds and pipes away, as did the one before, the others in the cells showing their anger back again by a chorus of quahking immediately after the first ceases piping, when, after the lapse of two days, or such a matter, the third swarm issues.

As there are less bees in number at this issue than there were when the second swarm issued, and more mature queens held as prisoners, the queen-cells are quite generally

vacated by the guard-bees; and queens, bees, and all rush out, and in such cases I have often counted as many as from 8 to 15 queens with one such swarm, though from one to five is the usual number.

Occasionally a colony will send out a fourth, and sometimes a fifth swarm, though the latter is of very rare occurrence; and sometimes all of the young queens will leave their cells and go out with the last swarm, in which case the parent colony is hopelessly queenless, and dies from their inability to procure a queen, when, as soon as the bees are gone, the larvæ of the wax-moth take possession of and destroy the combs, and the owner declares that the worms was what destroyed his bees.

In the above I have tried to give a short insight into the mysteries of the swarming of bees, many points of which do not seem to be fully understood, even by those who have kept bees for several years. Onondaga Co., N. Y.



Importance of Good Stores for Bees in Winter.

BY C. P. DADANT.

I believe it is necessary that we should report failures as well as successes, in order to enable the producers to judge of the possibilities of the business and take advantage of the experience of others, whether for good or for bad.

Last year was probably the driest season that we have ever seen, and the apiary conditions were anything but favorable. But in spite of the drouth the bees stored some honey. Those that were located on the lowlands near the Mississippi River gathered quite a crop from the fall blossoms that grow there in abundance. Those on the hills had, in this locality, a heavy flow of honey-dew, the honey-dew of plant-lice, a very unusual occurrence in the month of September, for I do not remember having ever seen honey-dew later than the month of July.

When our apiarist reported to me that the hives were getting fairly good stores from honey-dew, I had some misgivings as to the probable success of wintering on such food, but as he reported also that they already had some honey from other sources, though in small amount—and as I had noticed the bees at work in the fall bloom, which was rather scanty, it is true—I concluded we would best risk wintering on that food rather than going to the very considerable trouble of extracting all the honey and feeding. But I felt uneasy, and wrote to a friend who asked me about the condition of the bees, that I was afraid there might be considerable loss, owing to the bad supply of winter food. He reminded me of this after he was informed of the result.

Well, the beginning of winter was very favorable. The bees had a flight every few days, and everything looked prosperous. But after Jan. 15, we had about five weeks of confining weather, during which the bees could not fly, and when a warm day came it was plain that the bad food was doing the havoc anticipated, and worse, too. Nearly every colony suffered from diarrhea, and a few colonies were found dead. Then dwindling began, and slowly and steadily we lost one colony after another till one-third of the apiary had gone, here at the home place.

Two other apiaries were equally decimated, both having been within reach of the unhealthy supply, while the bees that had harvested a crop of fall honey wintered as well as any. Never had we seen such poor food in the hives, and never had we lost so many bees during the winter. It was practically a disaster, and until May the bees kept falling away. But at the opening of the fruit-bloom they began picking up, and now the hives are full (June 27), artificial divisions have refilled the greater number of empty hives, and our apiary is itself again, though still we have a few hives full of combs waiting for a little better weather. For the season is not at all favorable, the white clover bloom is missing almost entirely, though there is plenty of it coming up, but this will not bloom so as to give us any crop this year. The wet weather is filling the corn-fields with knot-weeds and Spanish-needles, and we look for a fair fall crop.

This loss, it seems to me, carries a good lesson. We knew, by former experience, that winter food was of great importance, but this evidences the fact that it is probably the most important item in successful wintering. Not only can not the bees be wintered safely out-of-doors with such food as honey-dew, when the confinement is to extend beyond a few days, but even cellar confinement is dangerous.

We had put 20 of our weakest colonies, in an out-apiary, in the cellar, and out of these only four came out alive. With good, healthy food it is not probable that we should

have lost more than one or two of these. So we must emphasize the need of good stores for winter.

It is not probable that an accident of this kind will occur very often, because honey-dew may not appear for years at the end of the season, but it is very clear that it would be better to extract all such honey, when it is present in the hives, rather than run the risk of its pernicious influence on the health of the bees.

But the beginner should remember, when he meets such a disaster, that it is a mistake to get discouraged; first, because such things do not happen very often; and, secondly, because an apiary can very soon be recuperated when you have the hives, the combs, and a few good colonies left to breed from. With a number of hives full of combs and partly full of honey, the most insignificant swarms can be turned into strong colonies in a few weeks of warm weather.

Hancock Co., Ill.



What Determines Sex?—A Big Question.

BY PROF. A. J. COOK.

When we stop to think, the fact of the approximate equality of the sexes numerically, not only among our own species but among most organisms, can but awaken surprise. It would seem that the determining factor must be some fortuitous event that is just as liable to turn one way as the other. It also speaks of a Planner who controls in the physical world, and has planned that the best—equality of the sexes in number—shall always hold.

Cattle-breeders have often argued that each alternate egg that passes from the ovaries will produce males, and the others will develop into females. While there is enough evidence to give this position some standing, and to effect results in auction sales of fine cattle, yet the numerous exceptions seem to negate its reliability, and I think now it has no hold at all among scientists.

The theory most advocated to-day is that the quantity of nourishment which the embryo at the time of sex-determination governs in fixing the trend. It is a well-known fact that the sexes are indistinguishable for some time. The sex-organs are present long before they are differentiated so that the sex can be determined even by closest examination. Even the keenest, best microscope can not tell whether male or female is to result. I doubt if there is any difference at first. Just when the difference commences, or what determines it, are interesting questions. The view now being explained is that the vigor of female just at the crucial time effects the trend of development. If the female is strong, and all her organs in healthy condition so that the egg or embryo will receive a maximum of nourishment, then a female results. If the reverse is true, then a male is produced. This theory has much to sustain it, else it would not receive the support and advocacy of our most advanced scientists.

THE ARGUMENT.

The animals and plants that first peopled the world, when Time was young, as also similar simple life today, are sexless, and only produced by division. These organisms are single-celled. They produce by simple dividing. After a time, that is, after they have divided again and again, they conjugate, that is, two cells unite in close apposition. After remaining together for a season they separate, when division goes on as before, each organism dividing and becoming two. That this conjugation in some way gives new vigor and strength cannot be doubted. This is surely a precursor in purpose and reality of real sexes among plants and animals.

BEEES IN THE ARGUMENT.

The Dzierzon theory of agamic reproduction, or parthenogenesis, in the production of drone-bees, it seems to me offers a substantial argument in favor of the new theory. I truly believe, notwithstanding the note of criticism that ever and anon is being sounded forth by doubters, that no truth in science is better founded than this, that the drone-bee is the result of reproduction from unimpregnated eggs. A few in early summer, and later, at the volition of the queen, have the sperm-cells withheld. These invariably produce drones. Old queens whose sperm-sacs, or spermathecas, have become emptied of the sperm-cells received at the time of mating, produce only drones. We call such, as also unmated queens, that lay eggs that develop, "drone-layers;" such can lay unimpregnated eggs, and so such can produce only drones, and are worthless.

We have seen how conjugation vivifies the lower organism. The giving of its substance, or exchange of substance, adds vigor and enhances vitality. Can we doubt that in the incorporation of the sperm within the egg of both plants and animals also gives new vigor, and that this is a principal purpose of sexuality in all organisms? It follows that the impregnated egg would have an added vigor, and if it is true that added vigor determines female structure and function, then, in case all eggs develop, those that have received the sperm will produce females, while the others will result in males. Usually, unimpregnated eggs have not vigor sufficient to develop at all. Prof. Loeb has shown that in some cases the addition of certain chemicals can induce this development of eggs without sperm, that else would have been infertile. Thus I believe the production of drone-bees from unimpregnated eggs, and females from impregnated ones, among ants, bees and wasps, is a real argument in favor of our theory.

There are other arguments. In the plant kingdom we find some cases where the reproductive cells are better fed and developed, and these always produce eggs, and are females. Plants and animals are alike in their basic structure, and such a phenomenon in one can be safely used as an argument in regard to the other.

If this theory is true, then if a female is kept in maximum vigor during gestation, the progeny will be female; if at a certain indeterminate time there is lack of vigor then a male will result. It is possible that an indigestible meal, a hard task, or a bitter disappointment, may have been parents of many a male, while the opposite gives us our females.

Los Angeles Co., Calif.



Methods of Rearing Good Queen-Bees.

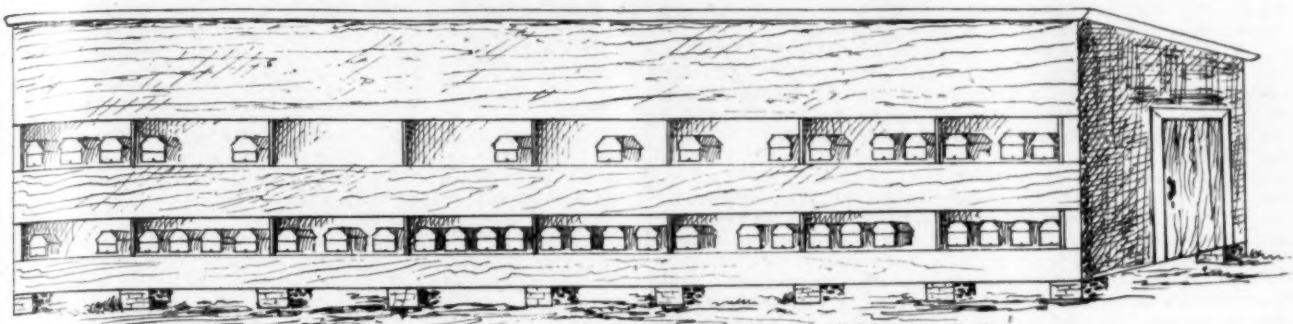
BY F. GREINER.

The cool and rainy weather of late has been unfavorable for honey-gathering here, and extremely so for queen-rearing. I am very anxious to put to test some of the newer and cheaper methods of keeping young queens in very small nuclei for the purpose of having them mated; but the weather we have had all during June has not permitted of any such work. At least it did not appear to me that mere handfuls of bees could be depended upon for it. If queen-rearing is at all practicable here during such times, good, strong, three-frame nuclei are to be preferred. Warmth—a certain degree of it—is essential for the development of brood, and I would as soon think of running an incubator 10 degrees below the proper temperature, as to mature bee-nymphs at a low temperature.

Of course, we do not know just in what manner, or to what extent, bee-brood is injured by letting it become cold or chilled. It is difficult to ascertain this. Capped brood may be exposed to a low temperature for a time and not be harmed, so far as I can see; but to be on the safe side, developing queens should be kept at the proper temperature all the time. This, however, is no higher in a doubled-up colony than in a single one when in full strength, and I can, therefore, see no advantage in using two colonies united for the purpose of rearing queens in that respect. If there was, one might reason thus:

If a single colony rears queens living three years, and a doubled-up colony queens living six years—about what Dr. Gallup claims—then ten colonies united into one giant colony must rear queens living 30 years. By continuing this doubling-up plan we would finally produce queens reaching the age of Methuselah, etc., *ad infinitum*. I can not think that Nature should have made a mistake in limiting the powers of a queen, the life of a queen, or that of the workers.

I suppose one might assert that two colonies united would be able to prepare a greater quantity of royal food, and in order to dispose of it would provide it for the baby queens more lavishly. It could be supposed that there was a limit to the production of this food. One colony, for instance, might be able to feed a dozen queen-larvæ properly, but no more. A doubled-up colony would have to feed each of the 12 larvæ a double portion; the same would result if but six cells were allowed to be built in the single colony. The superiority of queens would thus be governed to a great extent by the number of cells built in each colony. If but few cells were built they would be very large in order to hold this greater quantity of food. But this is not so. Only recently one of my best colonies built but a single queen-cell. It is exceptionally small. Another colony by its side built 12 or 15, all of which were large and long, indicating a large amount of food under the developing insect.



WINTER AND SUMMER BEE-HOUSE OF F. R. WEBSTER, OF CHESHIRE CO., N. H.

If the theory was sound, a colony robbed of all its brood would be in the best condition to feed queen-larvæ. But it seems that a colony in normal condition, with lots of brood of all ages, does the best work. Even after a colony has been robbed of the greater part of the bees, in the shape of a young swarm, it is still in a condition to keep warm and properly feed a large number of growing mother-bees.

I agree with Dr. Gallup in his closing remark on page 408: To rear long-lived, healthy queens we must rear them in a natural manner. It shall be my aim in the future, more than it has been during the past three or four years, to rear my queens from normally-stocked-up cells. However, we should not ignore the fact that Doolittle and others are just as successful since practicing queen-rearing according to the new methods, as they were before when queens were reared naturally.

The great majority of honey-producers have always reared their queens according to nature, and do so now, but it has not been discovered that the powers of the queens have materially changed or increased. I don't anticipate that we will accomplish wonders. It must have been an exceptional case when it was necessary to provide a hive of the capacity of three full Langstroth brood-chambers to hold the bees of one young swarm, as Dr. Gallup says in a previous article. If it was possible, and we should succeed in changing the nature of the honey-bee to such an extent our bee-supply dealers would have to get up different patterns for the hives to be used in the future.

Mr. Frank Benton suggested, some years ago, that the queen-nymph might absorb nourishment through her abdomen, or the part which rests upon the food. Dr. Gallup claims this process takes place through the umbilical cord. It can not be said in the true sense that the nymph rests upon the food, for the food is above the insect, from which it would fall if it were not held in its position in some manner. The umbilical cord may serve this purpose. It looks highly improbable to me that the queen-bee in its nymph stage should take nourishment in any fashion. Other insects pass this stage of their lives without taking food or having access to it; why should the queen-bee be an exception? On the other hand, it would seem like wasting material if this—what seems like an accumulation—which is found at the base of each queen-cell after the insect has emerged—should not have served a purpose.

There are a great many things connected with our pursuit still hidden in mystery. Many will remain so for all time. However, this should not hinder us, but rather urge us on—to work trying to solve some of them. All who engage in such work are deserving credit, although they may fail to find the real truth.

Ontario Co., N. Y., June 27.



A Bee-House for Winter and Summer.

BY F. R. WEBSTER.

I speak of wintering bees not only because I feel that I have been successful in my plan, but because I am convinced that others have failed to meet with success by other methods, or I might say because they had no method at all. Neither do they try to form one. If you have 20 head of cattle to winter you must prepare to have a suitable place to keep them; you must also have from 20 to 30 tons of hay, grain, etc. You are not expected to be to this great outlay to winter your bees, for if in a suitable place they will supply the necessary food for wintering themselves. But according to my way of thinking this is not all that is required of you.

You must provide a suitable winter shelter to protect them from the elements of our long, cold and stormy winters. For this purpose I build a bee-house, and it is for bees only. The accompanying rough drawing will give a fair idea of its construction. It is 8 feet between each space, double-deck, and intended to hold 4 hives between each space. It is 6 feet wide, with 2 platforms 30 inches wide for holding hives, with a slant to the front of 1½ inches; leaving the balance of space behind the hives for a walk.

My bees are kept in this house in winter as well as summer. The hives are always dry, which, in my opinion, is much better for wintering than one that is cold and frosty.

As soon as stormy weather begins I close the two open spaces with heavy canvas, which keeps it so dark that the bees never leave the hives. The warm sun warms the air through this canvas, and the air is always pure.

This house faces the south-east, while in the rear a high, uneven bank furnishes the best shelter from the northwest. My building standing to the northeast is another shelter from that direction.

Two or three times during the winter I raise the canvas curtain and allow the bees a good flight; at the same time I tip back the hives and brush off all dead bees from the bottom-boards.

I do not advise others to do as I do, but I will say that while others in this locality have lost nearly all their bees I have met with small reverses, and shall continue as I began until I have proven to myself that I am following the wrong trail.

The wise man profits by experience, while the otherwise spend their time in experimenting. What the foolish man does in the end the wise man should do in the beginning.

I am a subscriber to the American Bee Journal, and find in it many items of merit which are of great interest and profit to every bee-keeper of our great country.

Cheshire Co., N. H.



Bees Dying from Spraying While in Bloom.

BY C. H. LAKE.

EDITOR AMERICAN BEE JOURNAL:—

The first paragraph that caught my eye in the July 3rd edition of the American Bee Journal was the Richland Co., Wisconsin, case of "Poisoning from Spraying," and I take the liberty of being one of the many who will probably comply with your invitation to answer the questions there put forth.

1. The effect of spraying with any of the arsenical solutions, the trees or any kind of plants the bees work on, will be death to the bee that works on the flowers in quest of honey.

2. Would it affect the working bees? Yes, it would kill them.

3. Would it affect the brood, etc.? It would kill every larva fed with the honey gathered from sprayed fruit-trees.

4. Would the brood hatch? No, it would die within 24 hours after the nurse-bees fed it to any hatching brood, besides killing the nurse-bees.

5. Would it produce healthy bees if it should hatch? This I cannot answer, as in the case I am about to relate but few bees hatched at all, after the trees began to blossom.

I base these replies upon my own experience of 4 years ago. I had a small apiary of 39 colonies of as fine Italians, and in as fine condition, as I ever saw, when the spring opened. I had wintered them under a covered shed, with plenty of protection all about them, even leaves packed snug beneath the stands and between the hives, with a we

filled bag over the brood-combs. They were strong enough to swarm on the opening of the first blossoms.

The plums were the first to blossom, and a goodly number of trees were in close proximity to my bees. I then discovered in front of the hives quite a number of dead bees with pollen on their legs, and on opening several hives I found the bottoms covered with dead and dying. I remember picking up quite a number and sending them to various authorities asking their opinion of what was the trouble. A. I. Root, I remember, answered that he was unable to surmise the cause, and, you, Mr. Editor, may have received a box of the dead. At the time I had not thought of any one spraying.

Ten days later I visited the apiary again, and I could have filled a barrel with dead bees in front of the hives; thousands were dead with pellets of pollen on their legs, showing how quickly death came. I began then to look about for the cause, and in conversation with the gardener of an adjoining farm he made the statement, that "he must go and see about the men spraying."

"Spraying what?" was my inquiry. "Why, the orchards," he replied. "We have been at it for two weeks, to kill the codling-moth, etc."

"The cat was out of the bag," and he was the ruin of my bees.

It is useless for me to add anything further, but the result was, that every colony but two dwindled to a handful, and the moth soon made their appearance and I was compelled to break up the apiary entirely, by uniting the best I could.

If your correspondent will visit some of his near-by friends and make inquiries respecting the spraying while the trees are in blossom, he will find the cause, and also what poison they used.

One main point before I close: The cause of his "hatching young being healthy," was from the fact that plenty of the old stores were in his hives, while in my case they had but little, when the trees began to flower, and the young were fed the poisoned honey as fast as it was gathered.

I sincerely hope others, if there were such, will give their experience along this line, and that fruit-growers will get their eyes open one of these days and learn that they destroy thousands upon thousands of their best friends, not only the honey-bees, but all classes of insects that our Great Master has given to fertilize the blossoms to give them a bountiful crop.

If the same labor were expended in going over the orchards and gathering up and destroying all the "wind-falls" and defective fruit, which is the breeding-pen of the codling-moth, that is put into the task of spraying, I will guarantee the codling-moth will be a stranger in such orchards.

I was born and reared among fruit, and it was part of my daily task to destroy all fruit that dropped. The result was our fruit always maintained a high reputation, and no spraying was thought of. Baltimore Co., Md., July 8.



Do Robber-Bees Sting?—Other Questions.

BY ALLEN LATHAM.

This question is raised on page 115, and having had some experience in the matter I will venture to offer an opinion. I say that they do. I would suggest here that there should be a distinction made between thieves and robbers. Some bees get a thieving habit and will sneak about the apiary seeking an entrance here or there, always watchful and alert to keep out of a struggle with the entrance guards. These bees are sneak-thieves. There are other bees which get stirred up over some exposed honey, or the poorly guarded stores of a weak colony, so that they sally forth in conquest. Will they sting? Well, I should say so! They will sting both bee-keeper and the home bees.

Last fall I had a colony which, swarming late and possessing an exceedingly prolific queen, bred heavily, and had to hustle to get a living. A drop of honey could not be exposed a minute before that colony would be in an uproar. Sallying forth by thousands they would try to force every entrance in the yard, and would *kill* and be killed by the hundred. These bees were a bright yellow, and the dead bees left by the entrances were by no means all yellow ones. Many a time I watched these bees, and it was no infrequent sight to see one of them turn on its captor. Being an exceedingly active bee it often got its sting into action first. In more than one instance I saw the two bees sting simul-

taneously and both die. These are facts. This is not the only instance I have known, though I think that it is the exception rather than the rule for robber-bees to sting the home bees.

AMOUNT OF HONEY CONSUMED BY A COLONY IN A YEAR.

On page 263 is an excellent article by Adrian Getaz, but in it is the statement that a colony consumes 200 pounds of honey in a year. By my figures, allowing most generously, a strong colony will use only 165 pounds in a year. I doubt if average colonies consume more than 120 pounds in a year. If the matter seems of sufficient importance I will later submit my figuring, but not now, for it would take up a great deal of space.

MOVING BEES A SHORT DISTANCE.

I had occasion, last fall, to move several colonies a short distance. For distances less than 20 or 30 feet this plan worked well: The colony was moved about 10 inches; two days later two feet; two or three days later a yard; and so on till the full distance was reached. The bees seemed to get the habit soon of easily finding their hive, though it was changed as much as four feet.

For distances more than 30 feet I found this to work well: I have portico hives, and I fitted over the portico a board with four $\frac{3}{8}$ -inch holes in it. Few bees returned.

BREEDING FOR LONG TONGUES.

I would not discourage this worthy effort, but would cry out against too great expectations. Though a bee with a long tongue can thereby reach into a few deep blossoms, a tongue too long will hinder the work on the shallow blossoms. At present the legs, tongue and other parts of the bee are in perfect harmony. Give the bee too long a tongue and the harmony is destroyed. Too long a tongue will probably be a disadvantage in the domestic duties of the hive.

We can at best, then, seek to lengthen the tongue only slightly. Shall we gain more than the red clover by a lengthening? Let him who knows answer. If not, then it would be far better to seek red clover with short corolla. I am strongly of the opinion that we already possess bees with as long a tongue as their bodies will profitably utilize. Let us breed for larger bees with the longer tongues.

LONG-LIVED BEES.

Too much can not be said concerning longevity of bees. I shall continue to harp on this strain. A few years ago I had a colony with a 4-year-old queen. The queen could keep only four or five frames filled with brood, while other colonies kept eight or nine. The colony stored twice the amount (75 pounds) that I got from any other colony. The season was a poor one.

THE FATHERLESS DRONE.

Though I do not question that the drone is fatherless in the ordinary sense of the term, I do think that he has a father in the sense of looking like the drone which was the father of his sisters. Last summer I reared several queens from a mother whose workers are yellow and whose sons are well marked with yellow. Out of four of the young queens two mated with yellow stock, the other two with impure stock. The first two throw as yellow sons as their mother, the second two throw as many black drones as they do yellow ones. So that it is a mere accident, if you wish. It may be. I do not know. I will, however, show the progeny of these queens to any visitor. I have frequently had queens throw blacker drones than their mother furnished, and explained it by saying that the grandfather was dark. But when some queens throw yellow grandsons to a drone, and others black ones to the same drone, then we have a puzzle.

THE FATHER OF GREATER IMPORTANCE THAN THE MOTHER.

How often are we disappointed while breeding from a fine queen that we get queens uniformly inferior to the mother. Until we control mating this will remain true. I am more and more convinced that the drone makes up for his sonlessness by transmitting his character to his daughters, and that the queen throws her peculiarities into her sons. Allow me to offer facts. A few years ago I bred from a fine queen at a season when the drones flying were mostly from colonies of a neighbor whose bees were very vicious. The progeny of the young queens proved vicious. Again, last fall I bred queens from a dark Italian queen whose workers are rather cross. I had drones flying freely at the time from a colony of most gentle yellow bees. The

two queens which I have saved from that lot have beautiful yellow workers which are as gentle as one could desire. (By the way, the drones are much more yellow than those of the old mother-queen.) I believe, therefore, that the worker takes more strongly after the father, and that we shall have to control mating if we ever get the results that are possible.

WORKING FOR NO INCREASE.

I should like to get the composite opinion of bee-keepers on this plan: Clip the queen; let the colony swarm if it wills, allowing the queen to get lost, or take care of her in any way one may wish; let the bees return to the hive; six days later cut out all but one good cell, and then push the colony for section-work. Worcester Co., Mass.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

The Use of the Queen's Sting.

On page 409, "Ohio" asked whether the chief use of the queen's sting is in ovipositing, and my reply leaned strongly to the negative. My attention has been called to a different view expressed by no less an authority than T. W. Cowan. In his excellent work, "The Honey-Bee," he says in speaking of the queen's sting, page 81, "Dewitz, Vogel, and others, have pointed out that it is not only analogous to an ovipositor, but is actually used for this purpose by the queen-bee." (See also Grimshaw, B. B. J., 1889, p. 514.) I take pleasure in recording my change of belief. C. C. M.

A Case of Laying Worker.

What is the cause 5 or 6 eggs in a cell? My husband and I have looked over this colony for 3 hours and cannot find a queen, and we are quite positive there is no queen, but the cells are laid with eggs, and there are lots of bees, in some of the cells there are two young bees formed. Is there any danger of foul brood in a case of that kind. Should we try to throw the brood out with the extractor? Where there is more than one bee in a cell would they decay?

ONTARIO.

ANSWER.—You have on hand a case of laying workers. The best thing to do is to break up the colony and give combs and bees to other colonies. The brood that is present will produce only drones. You will find it cheaper to break up the colony and make a new one than to straighten up this one.

Requeening—Extracting—Yellow Sweet Clover.

1. I subscribed for the American Bee Journal for 3 months, and my time expired, I think, but I would like to have the paper continued. Would I be entitled to an Italian queen as a new subscriber, if I sent \$1.00?

2. I have 3 colonies in which I cannot find the queen, and that will not accept a queen-cell, will cut it out, but they won't draw a cell. They go on storing the honey same as the others. One of them draws out some cells about ½-inch long, caps them over, and in a few days cuts them out. I have tried everything I know, and would like some advice as I do not like to exterminate them.

3. I think I shall have more than a ton of honey in my apiary that I could extract. Shall I do it, and then let the bees build up for winter? I have sown buckwheat, and we have a good deal of goldenrod in the fall, so I am undecided what to do, whether to let them work in the supers or to extract.

4. Will sweet clover seed grow from the first bloom, or does it have to be cut and gathered the second crop like other clover?

5. Is the yellow sweet clover earlier than the white? and does it produce white honey? I would like something

that would give work for the bees about the first of June, for that is the most critical time for us here, for we want our little workers strong when the basswood comes.

NEBRASKA.

ANSWERS.—1. By the terms of the advertisement it will be seen that to secure a premium queen one already a subscriber must send in a subscription of another who has not been a subscriber; it is not your own subscription that counts, but that of a new subscriber whom you have secured. You are not barred out, however, even if you do not secure a new subscriber, for, according to one clause, you will see that not being in arrears, if you send in \$1.50 you will get the premium queen and the American Bee Journal for one year.

2. Try giving them from another colony a frame of brood with adhering bees, of course being careful to see that you do not take the queen along.

3. Better be on the safe side. You can extract later, if necessary, but make a sure thing of winter stores.

4. Seed from the first crop of red clover is not obtained because at that time bumble-bees are too scarce to fertilize it. Sweet clover being fertilized by hive-bees, the first crop is all right.

5. It is earlier, and it makes light honey.

Removing Granulated Honey from Combs.

I have about 40 Hoffman frames with as beautiful comb as one could wish to see, but during winter the honey granulated. I wish to know if there is any safe way of taking the granulated honey out, without melting the combs.

NEW BRUNSWICK.

ANSWER.—M. M. Baldrige gives this plan: Sprinkle the frames with water and give to the bees. As often as the bees lick them dry, sprinkle again.

Dark-Colored Wax and Foundation.

Do bees that feed on buckwheat honey produce dark-colored wax? If not, what is the cause of dark-brown-colored comb foundation?

ONTARIO.

ANSWER.—Foundation is not dark-colored because the wax was made from buckwheat honey, but because in some way the wax became dark after the bees were through with their part, such as having it melted in an iron kettle.

A Beginner's Troubles and Questions.

I cannot tell queen-cells from any other. We have had bees for 3 summers, and I never saw a queen that I know of. I am very much afraid of them. My husband is in California this summer, and I am the only one to care for the bees. I thought I had done something to boast of when I got courage enough to put on supers. We had only 3 colonies when they were put into the cellar. A good many died, and we did not know the cause, whether for lack of food or not, we did not dare to look.

1. Two of the colonies sent forth 2 swarms apiece in June, and the other one, a small colony, has not swarmed; they seem to be working the best. The last two swarms gave me trouble, and that is the reason I sought information. When No. 1 came out it settled in two different trees; I shook the smallest number until I got it to go over on the other tree with the rest. I then hived them. In about a half hour they were out again and settled on a grapevine all together, and I got them in once more.

2. This time they stayed in 9 days. I had set it beside the old hive; the fourth day when at daybreak I went to put on a super I saw a great tumult going on in it, and in the old one that it came out of, and it was kept up until the ninth day, when I noticed there were no bees going in and out, as there had been, but they had done quite a little work in making comb and laying eggs. The foundation comb had loosened, or they had gnawed it until the most of it lay on the floor of the hive, and the work they had done was without foundation comb.

3. There has been more noise in the 3 old hives, until 3 days ago. I supposed by the racket that was kept up in the old hives they must have gone back to the old hive they came out of, and that the queen would not receive them all, but made them divide up and some go in the other old hives; the hives were side by side, still the first 2 new

swarms were not troubled. Did they fly away, or go back into the hive in which they were reared?

The last swarm, No. 2, came out of another hive two days afterward, on a very sultry day, there was scarcely any air. I could not get them to stay in after chasing them in from three different trees; they finally flew away so far I could not carry the hive, so I lost them.

I find by the Bee Journal that it was as I thought—because it was too warm, and they preferred hanging on the trees to being in a hive.

Our bees are small brown ones, and I have been told by persons who know, that they are Italians; they are great workers.

MINNESOTA.

ANSWERS.—1. The dead bees you found in the cellar may have been nothing more than the usual number of bees that died from old age.

2. It is an unusual thing for a swarm to desert a hive after nine days; yet too great heat may have caused the bees to leave then—a view that has some confirmation in the fact that the foundation broke down.

3. The queen would not object to the return of the bees, but it is by no means certain that there was such return if you did not actually see it. The issuing of a swarm from the same hive a second time may have been nothing more than the issuing of an after-swarm that is likely to be a part of the regular program with a strong colony.

You will no doubt find plenty of information in future numbers of this journal equally as valuable as those already found, and the study of a text-book would be a matter of the greatest profit.

Bee-Keeping in Oscoda Co., Mich.

1. How about the climate and honey-plants of Oscoda Co., Mich.?

2. Would bees do well in a basswood location in Oscoda County?

3. Could I winter bees by packing in a shed in that climate without much loss from freezing?

4. Is the season too short for the bee-business in that county?

OHIO.

ANSWERS.—1. As the counties of the different States run up into the thousands it would be difficult to have a knowledge of all, and if any possessed such knowledge it would not be of sufficient general interest to occupy the large amount of necessary space with it. Some acquaintance living in that county can probably set you on the way to find out what you want.

2. You may count safely on basswood anywhere, although even so good a honey-plant as basswood has its years of failure.

3. Most likely, as it is less than 45 degrees north, and between two of the great lakes.

4. No.

Changing Queens for Bee-Paralysis.

I wrote you some time ago in regard to a colony of bees that was suffering from disease which you pronounced "bee-paralysis." I acted on your advice and let them alone for about 3 weeks, during which time the mortality increased very much, to the extent that perhaps 150 to 250 bees fluttered around the alighting-board each day and died before night. The queen all this time was doing her duty nobly, keeping the combs pretty well filled with eggs; she was a fine looking queen but I did not know her age as she was in a colony I bought in the spring of 1901. I thought possibly she might be very old, and I had about made up my mind I might as well break up the colony, as the death-rate about equaled the number of young bees produced, and the colony was not getting any stronger. About this time there was an article in the American Bee Journal by Dr. Gallup, in which he said, "If you have bee-paralysis take a sharp ax and cut off the head of the queen and give the colony another queen, and you will have no bee-paralysis, provided the queen you give is healthy." It was June 27 when I read that article, and I destroyed the queen and gave a queen-cell about ready to hatch; in a little more than a week she was depositing eggs. This is perhaps two weeks ago, and the disease seems to have disappeared.

Now, Doctor, was this a happen so, or is there some connection between the facts and the results?

The books seem to give no cure for this disease, indicating that not much is known about the disease, and I quote these facts to you in the hope that yourself or some one else,

by putting facts together from different sources, may eventually work out the cause and a cure.

OHIO.

ANSWER.—It is not an easy thing to prove that when a cure occurs after the administration of a certain remedy the cure was the result of the remedy, and perhaps equally difficult to prove that there was no relation between the two. Changing the queen of a colony is one of the many remedies put forth as a certain cure, only to prove a failure when tried by another person. Root's "A B C of Bee Culture" has this to say about it:

"In many cases destroying the queen of the infected colony, and introducing another from a healthy stock, effects a cure. This would seem to indicate that the disease is constitutional, coming from the queen; but in the South, where the disease is much more prevalent and destructive, destroying the queen seems to have but little effect."

That statement, together with the fact that in the North it is a common thing for the disease to disappear when no remedy is attempted, makes it at least not certain that the change of queen had any thing to do with the cure.

Changing Queens Now—Keeping Queens.

1. I would like to know whether it will do to change queens at this time of year or not? I have a colony of bees that were transferred about 2 weeks ago, and they have 13 queen-cells started, and I cannot find the queen; I suppose she was lost in transferring, by having so many cells started. I have a new colony of hybrid bees, which were found on a bush June 27. I would like to have the good queen in this hive, but they have a queen-cell started, and a very nice-looking queen. Can I take the queen from this colony and give it to the queenless one, and give the new queen to a good colony?

2. How long can I keep a queen before I introduce her?

ILLINOIS.

ANSWERS.—1. Yes, this is a good time of the year to change queens, or at any time when honey is freely coming in, and you can make the desired change if you observe the precautions advised in your text-book.

2. With a sufficient escort of workers and plenty to eat and drink, there is no trouble in keeping a queen a number of days while the weather is warm, possibly a month.

Transferring and Perhaps Robbing.

We lost the colony of bees transferred from the old box-hive to a new Danzenbaker hive. The bees were all, apparently, driven into the new hive, and the old hive, which contained but little honey or brood, and a lot of old dark-colored comb broken up and the pieces left lying near the stand. They seemed gradually to leave the new hive and to merge with another colony in the hive alongside, until the new hive is now empty, except a few dead bees. These bees in the two hives had not worked much all summer, and we are in doubt whether to risk transferring the other colony to the new Danzenbaker or not.

ILLINOIS.

ANSWER.—Without full particulars it is not easy to make a diagnosis. You do not say whether you left the new hive on the old stand, but it is supposed that you did. The fact that the old hive which contained some honey was broken up and the pieces left lying near the stand awakens suspicions that you left lying on the ground near the transferred colony the remains of their old residence, there being in the scattered combs some honey. It might not be a very wild guess, in such case, to say that other bees commenced promptly to work on this unprotected honey, and when that was cleaned up the marauders would turn their attention to the transferred colony, as yet in a somewhat demoralized condition, and then the robbed colony would join the robbers. This would be likely if in your locality, as in some other parts of the State, there has been something of a dearth in the harvest. It is not a safe thing to transfer when bees are not gathering.

Swarming—Italianizing—Rearing Queens—Dividing—Keeping Bees in a Building.

1. On July 8 I had a swarm come from a colony that had not swarmed for two years. About seven o'clock they came out and alighted in the top of a tall maple tree. At 9 o'clock I went to hive them; I sawed the limb off but be-

fore it reached the hive the rope broke and they fell about 4 feet from the hive, but they all went in. At noon, when I came in from the field, they had swarmed again in the hedge a block away. At one o'clock I took the same hive and tried it again and they all went in. At 3:30 o'clock I went to look at them and they were all out in front, not one inside. It was very hot and clear until 4 o'clock, when I got a sheet and set a new hive on it and shook the bees on the sheet in front of the new hive; they all went in but a few that hung to the front of the hive. At 5 it was raining; after the rain I poked them off of the front of the hive and they went in, and have been in ever since then and are doing well. Can you tell me why they did not stay the first time?

2. I am just starting, and have 2 colonies of black and 2 colonies of Italians. I would like to have all Italians. Do you think it too late to try to change now?

3. Can you tell me how to rear queens?

4. The 2 colonies of Italians are very strong and would swarm if more honey was coming in. Do you think it is too late to divide them now, or would you leave them this year?

5. I have an old building that has a vacant upstairs. Do you think it advisable to cut holes around the side and put the hives up there next spring?

ILLINOIS.

ANSWERS.—1. The heat was almost certainly the whole cause of the trouble. Next time try to keep the swarm cool. Leave the cover partly off for a day or two, and if the entrance is not large raise the hive an inch or so on blocks. If the hive is not in the shade, it will help to put an armful of hay or cut grass on top and keep it sprinkled with water.

2. Plenty of time yet.

3. You ought to find pretty full instructions in your text-book, and if you want to have fullest information on the subject you can hardly do better than to get Doolittle's excellent book on queen-rearing. See also the answer to Connecticut, page 312 of this journal.

4. It is not too late to divide, but you will have to feed if necessary.

5. Such a course is advisable only as a matter of necessity. If you have room enough to set the hives on good old Mother Earth, don't bother with any vacant up-stairs.

Changing Location of an Apiary—Crossing Blacks and Cyprians.

I send you a drawing of the location of our apiary. You will see by it that our bees have to cross one-half mile over an open bleak field. I have favored the removal of the bees to the main woods where the most of the honey is gathered, believing that the bees would gather $\frac{1}{4}$ more honey if they did not have to cross a bleak field in the face of strong southern wind. Our yield this year was 6,000 pounds of section honey from 130 colonies, spring count.

1. My partner, who is half owner, is opposed to the removal, claiming that he does not think it would pay us. I would like your opinion on the matter.

2. We are introducing Cyprian queens this season, and Cyprian queens mated to Carniolan drones. Our bees are blacks and hybrids except a few colonies of Italian 5-band, and I must say after 5 years' experience with 5-band Italians that I would not have them as a gift. They are cross, and will not store in supers even if they have full-drawn empty sections, except in a very few colonies. I find the first cross between blacks and Italians are all right. What do you think of a cross between blacks and Cyprians?

NORTH CAROLINA.

ANSWERS.—1. One of the very difficult things is to make a fair estimate as to the relative value of two different locations. One should know about the honey-plants in range of each, and even with that there will be more or less guessing. A flight of half a mile is no great thing for a bee, still it is desirable to have a pasturage as close as possible. Why not compromise matters by putting part in each place and making a comparative trial? Indeed it is quite likely that the bees will do better divided than all in one place. At any rate it would help a little toward deciding the question.

2. I don't know the character of a cross between blacks and Cyprians. Some strains of Cyprians are said to be cross, and it is possible the cross might be crosser.

The Premiums offered this week are well worth working for. Look at them.

QUEENS!

Buy them of H. G. QUIRIN, the largest Queen-Breeder in the North.

The A. I. Root Company tell us our stock is extra-fine; Editor York, of the American Bee Journal, says he has good reports from our stock from time to time; while J. L. Gandy, of Humboldt, Nebr., has secured over 400 pounds of honey (mostly comb) from single colonies containing our queens.

We have files of testimonials similar to the above.

Our Breeders originated from the highest-priced, Long-Tongued Red Clover Queens in the United States.

Fine Queens, promptness, and square dealing, have built up our present business, which was established in 1888.

Prices of GOLDEN and LEATHER-COLORED QUEENS, after July 1st:

	1	6	12
Selected	\$.75	\$4.00	\$ 7.00
Tested	1.00	5.00	9.00
Selected Tested	1.50	8.00	
Extra Selected Tested, the best that money can buy..	3.00		

We guarantee safe arrival, to any State, continental island, or any European country. Can fill all orders promptly, as we expect to keep 300 to 500 Queens on hand ahead of orders. Special price on 50 or 100. Free Circular. Address all orders to

Quirin the Queen-Breeder,

PARKERTOWN, OHIO.

[Parkertown is a P. O. Money Order office.]

1-A26t

Please mention the Bee Journal.



SHEEP MONEY IS GOOD MONEY and easy to make if you work for us. We will start you in business and furnish the capital. Work light and easy. Send 10 cents for full line of samples and particulars.
DRAPER PUBLISHING CO., Chicago, Ills.

Please mention Bee Journal when writing

GENERAL ITEMS

A Nebraska Report.

It looks so queer to read the reports of some of our brother bee-keepers, what discouraging reports from old bee-States, and we are having such a rush of honey and bees out here in Nebraska. I have been handling bees for over 50 years; I bought one of the first patent hives that was sold in that part of New York State; it had doors on behind, and drawers with boxes with glass in them, so we could sit and see the bees work. How many hours I have sat and watched them work, and how much I learned from it. I remember very well, though it has been over 50 years, what my old grandma said when I bought my hive, "You will never have any more luck with bees," because she did not think we should speculate in bees, for she was of the old Puritan stock that landed at Plymouth Rock. But, God bless the man that first invented the patent hives, for before that we had to rob and kill the most industrious and wisest insects that God ever made.

In all the 50 years this is one of the best of them all. This is the first year that I have taken care of my bees as I should. I started in the winter with 28 colonies, the mice destroyed 8 of them, and I bought 2 in the spring, so I had 22 to start with last spring, all good ones. I increased to 30 during plum and fruit blossom. Most of our fruit is wild, such as gooseberries, black raspberries and plums. Our bees commence on elm first, then the box-elder. In June, this year, I fed 100 pounds of granulated sugar, and kept the bees rushing so that when basswood and sweet clover came I had almost all of my 30 colonies in the boxes. When they swarmed I would

To make cows pay, use Sharples Cream Separators. Book Business Dairying & Cat. 212 free. W. Chester, Pa

Tennessee Queens



Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred $3\frac{1}{4}$ miles apart, and mated to select drones. No bees owned within 2 $\frac{1}{2}$ miles; none impure within 3, and but few within 5 miles. No disease. 29 years' experience. **WARRANTED QUEENS**, 75 cents each; **TESTED**, \$1.50 each. Discount on large orders. Contracts with dealers a specialty. Discount after July 1st

Send for circular.

JOHN M. DAVIS,

14A26t SPRING HILL, TENN.

Please mention Bee Journal when writing.

Requeening Out-Apiaries.

For Sale—Black Queens, 25c each; 6 for \$1.25; 10 for \$2.00.

J. M. JENKINS,

32A3t WETUMPKA, ALA.

BEE-SUPPLIES!

ROOT'S GOODS AT ROOT'S PRICES.

Everything used by bee-keepers. **POUDER'S HONEY-JARS.** Prompt service. Low Freight Rates. **NEW CATALOG FREE.**

WALTER S. POUDER.

512 MASS. AVE. INDIANAPOLIS, IND.

Please mention Bee Journal when writing advertisers.

Bee-Keepers—Attention!

Do not put your money into New Fangled Bee-Hives, but buy a plain, serviceable and well-made hive, such as the regular Dovetailed hive arranged for bee-way sections. Honey-producers of Colorado—one of the largest honey-producing sections in the world—use this style.

Thousands of Hives, Millions of Sections, ready for Prompt Shipment.

G. B. LEWIS CO., Watertown, Wis.

Please mention Bee Journal when writing.

ONE NIGHT TO DENVER

ON THE

COLORADO SPECIAL

VIA THE

Chicago, Union Pacific and North-Western Line

Leaving Chicago daily at 6.30 p.m.

Arriving Omaha - 7.00 a.m.

Arriving Denver - 7.50 p.m.

Another train leaves Chicago at 11.30 p.m. daily, arriving Denver 7.55 a.m., second morning.

The Best of Everything in Modern Transportation Service.

\$25.00

CHICAGO TO DENVER, COLORADO SPRINGS AND PUEBLO AND RETURN.

Tickets on sale on various dates through the summer, and from August 30 to September 10, inclusive, covering the time of the National Bee-Keepers' Convention at Denver, September 3-5, 1902. Tickets are limited for return to October 31, 1902.

For tickets and descriptive booklet on Colorado apply to agents of the North-Western-Union Pacific Line at

461 Broadway - - - New York	301 Main Street - - - Buffalo	12th Floor Park Building, Pittsburg
287 Broadway - - - New York	212 Clark Street - - - Chicago	234 Superior Street - - - Cleveland
601 Chestnut Street - Philadelphia	193 Clark Street - - - Chicago	17 Campus Martius - - - Detroit
802 Chestnut Street - Philadelphia	435 Vine Street - - - Cincinnati	126 Woodward Avenue - - - Detroit
368 Washington Street - Boston	53 East Fourth Street - Cincinnati	2 East King Street - - - Toronto
176 Washington Street - Boston	507 Smithfield Street - Pittsburg	60 Yonge Street - - - Toronto

H. R. McCULLOUGH,
Third Vice-President.

W. A. GARDNER,
General Manager.
CHICAGO.

W. B. KNISKERN,
Gen'l Pass'r & Ticket Agent.

Have You Seen Our Blue Cat-

alog? 60 illustrated pages; describes EVERYTHING NEEDED IN THE APIARY. BEST goods at the LOWEST prices. Alternating hives and Ferguson supers. Sent FREE; write for it. Tanks from galv. steel, red cedar, cypress or fir; freight paid; price-list free.

KRETCHMER MFG. CO., box 90, Red Oak, Iowa.

Agencies: Trester Supply Co., Lincoln, Neb.; Shugart & Ouran, Council Bluffs, Iowa; Chas. Spangler, Kentland, Ind. 12E26t

We are the Largest Manufacturers of Bee-Keepers' Supplies in the Northwest

Send for catalog.



We have the Best Goods, Lowest Prices, and Best Shipping Facilities.

28 cents Cash paid for Beeswax.

low, upon its receipt, or 30 cents in trade. Impure wax not taken at any price.

Address as follows, very plainly,

GEORGE W. YORK & CO., 144 & 146 Erie-St., Chicago, Ill.



This is a good time to send in your Beeswax. We are paying 28 cents a pound—CASH—for best yellow.

put them back, until last week, and then I had to begin to put them into hives. The swarms are so large that they fill the old Langstroth hive, that is, the most of them. I have some colonies that I hived June 28, that have their second super almost full, and everything full below. I have two and three supers on almost all of my colonies, and one and two on the new ones.

I have 38 colonies now, and all well filled. To-day is the first day in three weeks that I have had time to write. My daughter and I have been busy almost day and night; not expecting such a rush we were not prepared for it. A. C. BUTLER.

Dixon Co., Nebr., July 15.

Poisoned by Spraying—The Gulls.

We had the same experience, some years ago, as our Wisconsin friend, mentioned on page 419, and our loss was caused by being poisoned by the blossom-spraying method. There are several causes that may vary the results—if the spraying mixture is very strong, or if used in large quantities, or if the bees are working exclusively on that class of bloom it will soon use up the colony by killing off the worker-bees; but if the solution is weak, or spread on a limited area, or if the bees in the colony go to different points of the compass, or to different localities, these conditions will sometimes produce the results as our friend complains of.

If the trouble is only temporary it may be relieved sometimes by feeding the bees to keep them in the hive for a few days.

This spraying question is a wearisome one; if we are ever going to succeed we must catch the moth with its 90 to 125 eggs at the same time. The 2 to 5 percent we are catching now is little if any better than nothing.

On spraying to thin fruit (see page 436), there is a point that the writer and ye editor seemed to have missed. It does not require a poison spray for this work; clear water will produce the same effect. Practice or judgment is the only necessary qualification, as by a big drenching at the right time the whole crop can sometimes be washed off. Nature often proves this by a heavy downpour on trees when in full blossom, sometimes destroying all, or nearly all, of the entire crop. I know whereof I speak in this matter, and I know that while a poison spray may answer the same purpose, water is better because it will not injure the fruit, which the poison may do.

While we have our share of difficulties to cope with, some drouth, smelter-smoke, grasshoppers, etc., on the whole our State is doing fairly well in the different localities. We are getting from a few pounds to a full crop, even here in smoke-smothered Salt Lake County. Our old "saviors," the gulls, are devouring the grasshoppers by the wholesale, and I think we will be able to produce a sample of our product. While I don't feel cruel, I look with gratification on the many thousands of the big white birds as they devour this miserable pest; these birds are protected by law in Utah, and they seem to know it, for they are as tame as chickens. If it were not for these gulls sometimes we would have neither crops nor honey. E. S. LOVSEY.

Salt Lake Co., Utah, July 12.

Mulberries for Bees.

Don't you wish you had about 100 white mulberry trees in full bearing just now?

Most of you will agree that for reasons wiser bee-keepers than I may explain, bees, this season, have certainly "been backward about coming forward" with the usual supplies of pollen or nectar. Mine had just about existed up to two weeks ago.

For some unaccountable reasons the white mulberry fruited much earlier this season than usual by nearly a month. Ordinarily it is the first week in July before any fruit ripens, but here it is now the middle of the month, and the fruiting season is practically over.

I suppose the fact is due to so much rain. The berries were exceptionally large, but not up to their standard of sweetness. I began early to gather them, mash them to a pulp, and put on the alighting-boards. It is real

ITALIAN BEES AND QUEENS!



We have a strain of bees bred specially for honey-gathering and longevity. We feel confident of giving satisfaction.

PRICES:
for the remainder of this season:
1 Untested Queen \$.60
1 Tested Queen80
1 Select Tested Queen ... 1.00
1 Breeding Queen 1.50
1 Comb Nucleus, no queen 1.00

J. L. STRONG,

204 East Logan St., CLARINDA, IOWA.
25Atf Please mention the Bee Journal.

California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press,

The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, \$2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS,

330 Market Street, SAN FRANCISCO, CAL.
Please mention Bee Journal when writing

Dittmer's Foundation!

Retail—Wholesale—Jobbing.

I use a PROCESS that produces EVERY ESSENTIAL necessary to make it the BEST and MOST desirable in all respects. My PROCESS and AUTOMATIC MACHINES are my own inventions, which enable me to SELL FOUNDATION and

Work Wax Into Foundation For Cash

at prices that are the lowest. Catalog giving

Full Line of Supplies,

with prices and samples, free on application
BEEWAX WANTED.

GUS. DITTMER, Augusta, Wis.

Please mention Bee Journal when writing

Knights Pythias Biennial Meeting.

For this gathering in San Francisco in August next excursion tickets will be sold via the Chicago, Milwaukee & St. Paul Railway from Chicago to San Francisco or Los Angeles for \$50 for the round trip with final return limit Sept. 30.

The "Chicago, Milwaukee & St. Paul" Railway is the Short Line between Chicago and Omaha. Two through trains daily in each direction with the best Sleeping Car and Dining Car Service, and all regular travelers know and appreciate the merits of the Chicago, Milwaukee & St. Paul Railway's Short Line between the East and the West.

Time tables, maps and information furnished on application to F. A. Miller, General Passenger Agent, Chicago.

32A2t

CAN YOU COUNT DOTS?



If you can, send your name and address for a sample copy of the best farm paper published and particulars of our great dot counting contest. Every person who counts correctly gets a prize, while those who count best get cash prizes from \$1 to \$125 and a \$2,500 in Prizes. Send name on Postal to-day for free particulars. Address, UP-TO-DATE FARMING AND GARDENING, Box 84, INDIANAPOLIS, IND.
30A4t Please mention Bee Journal when writing

fun to see the bees swarm all over the crushed berries, and extract every particle of substance, leaving the bare seeds as clean as if actually washed.

The weight of the hive is a certain evidence of what they did with the juice.

The more I reflect and observe, the more impressed I am with the usefulness of the white mulberry as a bee-provender, also as a beautiful shade-tree—a tree so hardy as almost to leave the conviction that it would thrive on an iceberg!

But apparent trouble comes with all good things. Before I began to feed the bees on mulberries no one desired more than to taste them. "Ach! too sweet!" Now that I wish them for the specific purpose, boys come around daily to nibble at them; but they don't stop at nibbling. I, too, have acquired a decided taste for them, and my "better half" remarked naively enough the other day, that "one felt like having just one more." Indeed, after eating a bowlful! And, too, the robins, and even a few cat-birds, have been lured by the fruit, until what I had set apart for the bees has become a coveted morsel for two-legged animals, with and without wings.

Only one way out of the difficulty—plant more of the trees. This I am prepared to do by rooting cuttings, and sowing the seed. I now have plants growing from both processes, and hope soon to be well stocked and able to make some of the most interested readers of the American Bee Journal a present of a plant to each (none for sale). Exception was taken to a previous article on the value of white mulberries for bee-feeding, that the bees could not extract the juice from the fruit. But bear in mind that I specifically stated that the berries must first be crushed before the pulp is fed to them.

DR. PEIRO.

78 State St., Chicago, Ill., July 10.

Bees Not Doing Well.

My bees are not doing very well this season. I started in the spring with 21 colonies, and now have 38 by natural swarming. I had one swarm issue at 5:15 in the morning of July 3, and at 7 o'clock there were 7 swarms flying. Four swarms clustered on one bunch, and 3 on another. I hived the 3 in another hive. I use the Langstroth hives. I got 17½ pounds of honey in 4¼ sections from one swarm in 20 days after being in the hive. I have one colony I put in a hive on July 7; they cast a large swarm, and I examined the old hive when the bees were flying, and found it filled with brood and about a dozen queen-cells. I returned them to the old hive again, and they are doing very well now.

CHAS. HEITCHLER.

Henry Co., Ohio, July 21.



One Way to Improve Stock.

A good thing is the plan Doolittle offers, to graft cells in a colony with a queen that the bees are trying to supersede. As beginners are not likely to have many such queens, but are likely to have plenty of colonies preparing for swarming, why not graft swarming-cells? They could be cut out two or three days before time for the queens to emerge, and quite a batch might be secured—[The best time in the world for the honey-producer to rear queens, and a very choice lot of them, too, is during the swarming season. He can well afford to take the time to graft some of his swarming cells with larvae or eggs from a choice breeder; then when those cells are capped cut them out and put them in nuclei. This is a very simple and easy way to rear queens, and is, in fact, if I mistake not, the one practiced by some of our most successful honey-producers who have become convinced that such queens are remarkably strong and vigorous. The next best colony, according to

Tested Adel Queens.

Reared by a New Method. Queens very large, prolific and handsome. One Queen, \$1.00; three Queens, \$2.75; six Queens, \$5.00; twelve Queens, \$9.00. Everything guaranteed.

HENRY ALLEY,

WENHAM, MASS.

26Atf

Please mention Bee Journal when writing.



WE COULD SAVE

\$500 a day if we could make PAGE FENCE of common fence wire, but it won't hold the coil.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

Please mention Bee Journal when writing.

Low Round Trip Rates, via Union Pacific, from Missouri River,

To Denver, Colorado Springs, and Pueblo, Colo., July 1 to 13, inclusive, Aug. 1 to 14, 23 to 24, and 30 to 31, inclusive.

To Denver, Colorado Springs, and Pueblo, Colo., June 25 to 30, inclusive, July 14 to 31, inclusive.

To Salt Lake City and Ogden, Utah, Aug. 1 to 14, inclusive.

To Glenwood Springs, Colo., July 1 to 13, inclusive, Aug. 1 to 14, 23 to 24, and 30 to 31, inclusive.

To Salt Lake City and Ogden, Utah, July 1 to 13, inclusive, Aug. 23 to 24, and 30 to 31, inclusive.

To Glenwood Springs, Colo., June 25 to 30, inclusive, July 14 to 31, inclusive.

To Salt Lake City and Ogden, Utah, June 25 to 30, inclusive, July 14 to 31, inclusive.

To San Francisco or Los Angeles, Calif., Aug. 2 to 10, inclusive.

To Portland, Oreg., Tacoma and Seattle, Wash., July 11 to 21, inclusive.

Correspondingly Low Rates From Intermediate Points.

Full Information Cheerfully Furnished on application to

E. L. LOMAX, G. P. & T. A.,

27Atf

OMAHA, NEB.

\$5 TO START YOU IN BUSINESS

We will present you with the first \$5 you take in to start you in a good paying business. Send 10 cents for full line of samples and directions how to begin.

DRAPER PUBLISHING CO., Chicago, Ill.

Please mention Bee Journal when writing.

The American Institute of Phrenology,

(INCORPORATED 1866)

Opens its next session Sept. 3, 1902. For particulars apply to the Secretary, M. H. PIERCY, care of Fowler & Wells Co., 24 East 22d Street, New York, N. Y.

J. J. A.

Please mention Bee Journal when writing Advertisers.

"SEASONABLE OFFERINGS."

MUTH'S POUND SQUARE FLINT-GLASS HONEY-JARS, with patent air-tight GLASS STOPPERS, at \$5.50 per gross. FAR SUPERIOR TO OLD STYLE WITH CORKS. Try a gross. Just the thing for home market.

CRATES OF TWO 60-lb. CANS, been used once, in good condition, in lots of 5 crates, 40c each; 10 or more, 35c. This lot is limited; order at once.

QUEENS! The Best Money Can Buy!

BUCKEYE STRAIN 3-BANDED are the genuine RED CLOVER WORKERS. MUTH'S STRAIN GOLDEN ITALIANS can not to be surpassed. Either of above, 75c each; 6 for \$4.00. Selected tested, \$1.50 each.

A trial will convince you. Send for our catalog of BEE-SUPPLIES.

THE FRED W. MUTH CO., Front & Walnut Sts., Cincinnati, Ohio.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)....	75	\$1.40	\$3.25	\$6.00
Sweet Clover (yellow)....	90	1.70	4.00	7.50
Alsike Clover	1.00	1.80	4.25	8.00
White Clover	1.20	2.30	5.50	10.50
Alfalfa Clover80	1.40	3.25	6.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

GEORGE W. YORK & CO.

144 & 146 Erie Street, CHICAGO, ILL.

Bees For Sale.

75 colonies in Improved Dovetailer Hives, in lots to suit purchaser.

O. H. HYATT,

13Atf SHENANDOAH, Page Co., Iowa.

Please mention Bee Journal when writing.



DAIRYMEN ARE DELIGHTED

to meet those who work for us. Cow keepers—say have money. We start you in business. You make large profits. Easy work. We furnish capital. Send 10 cents for full line of samples and particulars. DRAPER PUBLISHING CO., Chicago, Ills.

1902—Bee-Keepers' Supplies!

We can furnish you with The A. I. Root Co's goods at wholesale or retail at their prices. We can save you freight, and ship promptly. Market price paid for beeswax. Send for our 1902 catalog. M. H. HUNT & SON, Bell Branch, Wayne Co., Mich. Please mention Bee Journal when writing.

Prize = Winning Stock

Daughters of Moore's famous long-tongued red clover Italian Queen, which won the \$25.00 prize offered by The A. I. Root Co. for the longest-tongued bees; and also daughters of other choice long-tongued red-clover breeders whose bees "just roll in the honey," as Mr. Henry Schmidt, of Hutto, Tex., puts it, now ready to go by return mail. Untested Queens, 75c each; six, \$4.00; dozen, \$7.50. Select untested, \$1.00 each; six, \$5.00; dozen, \$9.00. Safe arrival and satisfaction guaranteed. Circular free.

J. P. MOORE,

28Atf Lock Box 1, MORGAN, KY.
Please mention Bee Journal when writing

WANTED

and price wanted.

W. H. YENNEY
Glassboro, N. J.

FREE FOR A MONTH

If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.
Please mention Bee Journal when writing



The Life of the Wheel

depends upon the make of the wheel

ELECTRIC WHEELS

last almost forever. Fit any wagon, straight or staggered spokes. Write for the catalogue. We mail it free.

ELECTRIC WHEEL CO., Box 16, Quincy, Ills.

Queens Now Ready to Supply by Return Mail

Stock which cannot be excelled. Each variety bred in separate apiaries, from selected mothers; have proven their qualities as great honey-gatherers.

Golden Italians Have no superior, and few equals. Untested, 75 cents; 6 for \$4.00.

Red Clover Queens, which left all records behind in honey-gathering. Untested, \$1.00; 6 for \$5.00.

Carniolans —They are so highly recommended, being more gentle than all others. Untested, \$1.00.

ROOT'S GOODS AT ROOT'S FACTORY PRICES.

C. H. W. WEBER,

2146-2148 Central Avenue,
CINCINNATI, OHIO.

(Successor to Chas. F. Muth and A. Muth.)

Marshfield Manufacturing Company.

Our specialty is making SECTIONS, and they are the best in the market. Wisconsin BASSWOOD is the right kind for them. We have a full line of BEE-SUPPLIES. Write for free illustrated catalog and price-list.

Marshfield Manufacturing Company, Marshfield, Wis.

7A26t

Please mention Bee Journal when writing.

our experience, is the one that is trying to supersede queens. Indeed, we consider such a colony a prize, and set it apart and keep it breeding and filling out cells.—EDITOR.]—Gleanings in Bee-Culture.

Moisture in Cellars.

"A York County Bee-Keeper" says in the Canadian Bee Journal:

So Mr. Alpaugh thinks that a perfectly dry cellar is not an ideal place to winter bees in! There are others who hold the same opinion. Just a short time ago a bee-keeper friend was telling me that the past winter he had part of his bees in his cellar, which is very dry. The bees were quite noisy and restless, temperature 44 degrees till along towards spring; during a heavy rain, water contrived somehow to fill up the drain around the cellar, when the bees at once quieted down and remained quiet as long as the water was there. Looks as if Doolittle's idea, that bees need moisture more than fresh air, is about right after all.

Our Nomination as a Candidate for General Manager.

In Gleanings in Bee-Culture for July 15 appeared the following, which was written entirely unbeknown to us, and consequently without our consent:

GEORGE W. YORK FOR GENERAL MANAGER.

I consider Mr. George W. York, editor and owner of the American Bee Journal, as the logical candidate for General Manager of the National Bee-Keepers' Association at the election to be held in December, 1902. It is common knowledge that Mr. York stands in the foremost rank of bee-men in America, and that he has always had the interest of the National and of bee-keepers in general at heart. Mr. York is ex-President of the National, and right in the line for promotion.

It is probably not generally known that Mr. York received the next highest number of votes for General Manager after Mr. Secor at the last election. Mr. York has declared repeatedly that he is not a candidate for any office, but I believe he would obey a unanimous call, and sacrifice his personal feelings to the good of the greatest number. He is in position to do great good in the way of publicity and promotion, and his journal has always been ready to forward the interests of the National.

HERMAN F. MOORE.

In a foot-note comment on the foregoing, Editor E. R. Root wrote this:

It is true that Mr. York has repeatedly declared he is not a candidate for the office of General Manager. I once broached the subject to him, and he very positively declined to be considered a candidate. He based his refusal on the ground that no bee-editor should take the office. But if he were to get the unanimous support he might reconsider. Personally I know he would make a good General Manager; and I do not see why the fact of his being an editor of a bee-paper should stand in the way of his considering the office. Mr. Secor has said he wished to be relieved. Just what his future action will be I do not know. There are a dozen good men whom I could support as candidates, and Mr. York. Mr. Hutchinson, Mr. France, and Mr. Secor are some of them.

Now, when I say I do not believe that the position of editor bars one from being General Manager, I wish to say emphatically there are other reasons why I, as one of them, can not and will not be considered as a candidate; but I can give my support most cordially to any other bee-editors.

I suspect the publication of this letter from Mr. Moore will raise a breeze with Bro. York. Well, let him raise the wind, Mr. Moore and I can stand a good deal—these hot days. The Association needs some men who can cool things off a little.

Certainly, all the above is very pleasant, and appreciated, but we really do not care to have the office of General Manager. We have often said that we did not think that an edi-

tor of a bee-paper should hold the position of General Manager. We are still of that opinion. And yet we realize that we have a duty to perform to our friends as well as to the cause we represent and are so deeply interested in. We are here to serve wherever best we can; and, as Mr. Root suggests, were the support on the part of the membership practically unanimous for us as General Manager, we would in duty bound feel that we should reconsider, and work where the majority wanted us to be. That would simply be in the line of duty, as we see it.

Whether or not a bee-paper editor be General Manager of the National Bee-Keepers' Association is not a matter of right or wrong. If it were, and we felt that it would be a wrong thing for us or any other editor to hold the position, we would oppose it as strongly as we could, no matter how hot or how cool the weather.

Personally, we would not do a single thing to win the position. It is no easy job. It is of no financial advantage to any one, as both Mr. Newman and Mr. Secor can easily testify. It means a lot of careful, conscientious work, but work that needs to be done, and done well, for the good of bee-keepers and the pursuit in which they are vitally interested.

So, all we can say now is, that if elected to the position of General Manager we would simply endeavor to fulfill its requirements to the best of our ability. If not elected, there will be nothing to regret on our part. We would expect to continue to labor for the good of bee-keepers and the Association just the same as we have done heretofore, counting it a privilege to have been permitted to aid so worthy a band of the world's workers.

Against Liquor and Tobacco.

Prohibitive rules against the use of liquor and tobacco have become now so nearly universal among railway and other large corporations that the recent action in this direction taken by the Chicago & North-Western Company did not receive the attention it deserved. It established far more rigid rules than ordinary, inasmuch as the company not only forbids the use of intoxicants, but forbids its men frequenting places where they are sold. An employee who does either is liable to get a curt note of dismissal from the general superintendent or the general manager. The operation of trains in this day of high speed and congested traffic requires every ounce of brain and nerve force an employee can bring into action, and for this reason the management of the North-Western does not purpose having the brains of its passenger-men befogged with whisky and tobacco. Regarding the new rule prohibiting the use of tobacco an official of the company said:

"Cleanliness and neatness are important factors in the railroading of to-day, and these considerations alone are sufficient warrant for a prohibition of the use of tobacco by employees when on duty. We desire that employees shall not make our property disgusting to travelers by the use of tobacco, and themselves steeped by tobacco-poison while on duty. I believe, however, that the use of tobacco by railroad men engaged in train operations is fast decreasing, and the time will come when a tobacco-user will be as unwelcome in the transportation departments of the railroads as a drunkard is now."

Young men who are contracting the tobacco habit in any form, or who take liquor of any kind as a beverage, or associate with those who do, may as well give up all hope of entering business life. They are not wanted. The door of success is shut before they approach its threshold.—Ram's Horn.

CLOSE SATURDAYS AT 1 P.M.—Our customers and friends will kindly remember that beginning with July 1, for three months we close our office and bee-supply store at 1 p.m. on Saturdays. This is our usual custom. Nearly all other firms here begin the Saturday afternoon closing with May 1st, but we keep open two months later on account of the local bee-keepers who find it more convenient to call Saturday afternoons for bee-supplies.

QUEENS—Try Our Stock.

DAVENPORT, IOWA, Dec. 31, 1901.
Your queens are fully up to standard. The honey queen that you sent my brother takes the lead. She had a rousing colony when put up for winter. The goldens can be handled without smoke or veil.

Very truly yours, JOHN THORMING.

MONTHS	July and August.
NUMBER OF QUEENS	1 6 12
HONEY QUEENS	
Untested	\$.75 \$4.00 \$ 7.00
Tested	1.00 5.00 10.00
GOLDEN QUEENS	
Untested	\$.75 \$4.00 \$ 7.00
Tested	1.00 5.00 10.00

Select tested, \$2.00. Breeders, \$5.00 each.
2-frame Nucleus with Untested Queen, \$2.25 each; 3-frame Nucleus with Untested Queen, \$3.00 each; 6 for \$2.75 each.

D. J. BLOCHER, Pearl City, Ill.
27Atf Please mention the Bee Journal



Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at \$1.00; or for \$1.10 we will mail the Bee Journal one year and the Clipping Device. Address, GEORGE W. YORK & COMPANY, Chicago, Ill.

Bees For Sale

On account of removal I will sell my 13 colonies of Bees, including a \$5.00 Doolittle Queen, for the cost of hives and fixtures.
E. L. DRESSER, Divernon, Sangamon Co., Ill.
32A2t Please mention the Bee Journal.

BOYS WE WANT WORKERS

Boys, Girls, old and young alike, make money working for us. We furnish capital to start you in business. Send us 10c stamps or silver for full instructions and a line of samples to work with. DRAPER PUBLISHING CO., Chicago, Ill.
Please mention Bee Journal when writing

"What Happened to Ted"

BY ISABELLE HORTON.

This is a true story of the poor and unfortunate in city life. Miss Horton, the author, is a deaconess whose experiences among the city poverty stricken are both interesting and sad. This particular short story—60 pages, 5x8 1/2 inches, bound in paper cover—gives somewhat of an insight into a little of the hard lot of the poor. Price, postpaid, only 10 cents (stamps or silver.) Address,

ISABELLE HORTON,
227 EAST OHIO STREET, CHICAGO, ILL.
Please mention Bee Journal when writing.

If you want the Bee-Book

That covers the whole Apicultural Field more completely than any other published, send \$1.25 to

Prof. A. J. Cook, Claremont, Cal.,

—FOR HIS—

"Bee-Keeper's Guide."

Liberal Discounts to the Trade.

A Golden Opportunity!

A few tested 5-banded stock, \$1.50. Red Clover Queens balance season, 50 cents.
R. R. No. 6. J. F. MICHAEL, Winchester, Ind.
32A2t Mention the American Bee Journal.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, July 19.—Not any comb honey of the new crop yet on the market, but advices of this week would indicate that some sections of the country are now prepared to ship as soon as any demand appears, and beginning with August there has in past seasons been more or less of a market, and it is looked for to begin this year on time. This for several reasons, one being that we are going to have some choice white clover and basswood to offer, which has not been over plentiful during the past three or four seasons. Prices are nominally the same as during the past 90 days. Beeswax sells at 30c.
R. A. BURNETT & Co. □

KANSAS CITY, Aug. 2.—Receipts of comb honey increasing; fairly good demand. New fancy white, 14@15c; No. 1, 13@14c; amber, 12@13c. Extracted, white, 6c; amber, 5@5 1/2c. Beeswax, 22@25c.
C. C. CLEMONS & Co.

CINCINNATI, July 26.—Considerable stock of 1901 crop fancy comb on the market and sells at 14@15c; there is a call for new comb honey, as yet none on the market; this market demands fancy comb; all other grades discourages trade. Extracted is in fair demand at 5 1/2@6c for amber and 7@8c for clover. Beeswax, 28@30c.
THE FRED W. MUTH CO.

ALBANY, N. Y., July 10.—Honey market not opened yet for this season, but we look for demand to begin in a couple weeks. No old crop in the way. Expect good demand and good prices for new crop, which is very light in this vicinity.
H. R. WRIGHT.

NEW YORK, July 7.—There is some fair demand for comb honey at 14c for strictly fancy white; 12@13c for No. 1, and 10@11c for amber. Extracted quiet at unchanging prices. Beeswax dull and declining at 29c.

HILDEBRETH & SROCKEN.

CINCINNATI, Aug. 2.—Some small lots of new comb honey have been coming in, but as the weather is so warm there is very little demand. That sold to stores brought 15c for fancy.

The market for extracted was more lively, brings as follows: Amber, 5@5 1/2c; alfalfa water white, 6@6 1/2c; and white clover, 7@7 1/2c. Beeswax, 30c cash.
C. H. W. WEBER.

SAN FRANCISCO, July 23.—White comb, 10@12 1/2 cents; amber, 7@10c; dark, 6@7 cents. Extracted, white, 5@—; light amber, 4 1/2@—; amber, 4@—, Beeswax, good to choice, light, 27@29c; dark, 25@26c.

There are moderate quantities arriving, with asking figures in the main above the views of wholesale operators. Business doing at present in this center is principally of a small jobbing or retail character, and in this way transfers are being made at an advance on any figures which would be warranted as quotations based on values for round lots.

WANTED!

Honey and Beeswax. Mail sample and state price delivered Cincinnati. C. H. W. WEBER, 2146-2148 Central Ave., CINCINNATI, OHIO.

21Atf Mention the American Bee Journal.

WE can place a few cars of COMB AND EXTRACTED HONEY. Will be glad to correspond with parties having some to offer. We also solicit local consignments.

C. C. CLEMONS & CO.,
29A9t 306 Grand Ave., KANSAS CITY, MO.

WANTED WHITE CLOVER EXTRACTED HONEY! Send sample and best price delivered here; also Fancy Comb wanted in no drip cases.

THE FRED W. MUTH CO.
32Atf Front and Walnut, CINCINNATI, OHIO.

Wanted Comb and Extracted Honey!

State price, kind and quantity.
R. A. BURNETT & CO., 199 S. Water St., CHICAGO
33Atf Please mention the Bee Journal.

BINGHAM'S PATENT
24 years the best. Send for Circular.
25Atf T. F. BINGHAM, Farwell, Mich.

Please mention Bee Journal when writing advertisers.

BEE-KEEPERS,

Save Money by Buying

Hives, Sections, Brood Frames, Extractors, Smokers, AND EVERYTHING ELSE YOU NEED, OF**THE W. T. FALGONER MFG. CO.,**
Jamestown, N. Y.

Our goods are guaranteed of superior quality in every way.

Send for our large illustrated catalog, and copy of

THE AMERICAN BEE-KEEPER,
a monthly for all bee-keepers; 50c a year. (Now in 12th year. H. E. HILL, Editor.)

W. M. GERRISH, E. Nottingham, N. H., carries a full line of our goods at catalog prices. Order of him and save freight.

Please mention Bee Journal when writing.

The Rural Californian

Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this the paper also tells you all about California Agriculture and Horticulture. \$1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.

THE RURAL-CALIFORNIAN,
218 North Main Street, - LOS ANGELES, CAL.**\$300,000,000.00 A YEAR**
and you may have part of it if you work for us. Uncle Sam's poultry product pays that sum. Send 10c for samples and particulars. We furnish capital to start you in business. Draper Publishing Co., Chicago, Ill.**Danzenbaker Hives.**In flat and made up—at very low price. 50Ctf
O. C. MASTIN, Trent, S. D.**DO YOU READ**

—THE—

Modern Farmer

If not, why not? You get it a whole year for 25 cents. Your money back, if not satisfied. Sample Copy Free. Get two of your farmer friends to take it a year, send us 50 cents, and get yours free. Send their names for samples. Address,

MODERN FARMER,
9Ctf ST. JOSEPH, MO.**BARNES' FOOT POWER MACHINERY**

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work.

This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, W. F. & JOHN BARNES,
995 Ruby St., Rockford, Ill.**The American Poultry Journal**

325 Dearborn Street, CHICAGO, ILL.

A Journal that is over a quarter of a century old and is still growing must possess intrinsic merit of its own, and its field must be a valuable one. Such is the

American Poultry Journal.

50 cents a Year. Mention the Bee Journal.

C. P. DADANT.
1851.**CHAS. DADANT.**

1817-1902.

L. C. DADANT.
1879.**To Our Friends and Customers,**

Our senior member, Mr. Chas. Dadant, died after a short illness, July 16th. He was eighty-five years of age.

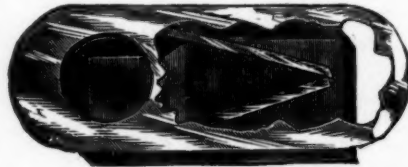
The status of the firm will remain the same, Louis C. Dadant joining his father C. P. Dadant, under the firm name of

DADANT & SON,

HAMILTON, ILLINOIS.

The Porter Spring Escape

is a great labor-saver. Don't lift the heavy super, shake and brush the bees, cruelly smoke and cause uncapping, stings and robbing.

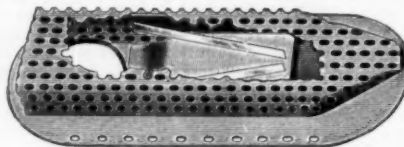


Use it, and make work a pleasure instead of a dread. Try it, and you won't be without it again. Price, 20 cents.

— THE —

Porter Honey-House Escape

clears the extracting-house of bees. The worst robber cannot return. One over each window and door will save you great



annoyance. If you tier up the supers to rid of bees this is the BEST of Escapes. Try it and you will wonder how you got along without it so long! Price, 20 cents. Address,

THE A. I. ROOT CO., Medina, Ohio.

Also for sale by all our branch houses and agencies, and all dealers in bee-keepers' supplies.

GEORGE W. YORK & CO. 144 & 146 Erie Street,
CHICAGO ILL.,
are headquarters for ROOT'S BEE-KEEPERS' SUPPLIES IN CHICAGO.
Send to them for their free Catalog.